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CASE REPORT

Fish bone-related intra-abdominal abscess in an elderly patient

Chien-Kan Chen^a, Yu-Jang Su^{a,b,*}, Yen-Chun Lai^{b,c},
Henry Kam-Hong Cheng^a, Wen-Han Chang^a

^a Department of Emergency Medicine, Mackay Memorial Hospital, Taipei 10449, Taiwan

^b Mackay Medicine, Nursing and Management College, Taipei, Taiwan

^c Department of Anesthesiology, Mackay Memorial Hospital, Taipei, Taiwan

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Summary Foreign body ingestion is not an uncommon problem encountered in clinical practice. The accidental ingestion of fish bones may sometimes lead to penetration injuries with complicating abscess formation. The ingestion of foreign bodies results in gastrointestinal perforation in about 1% of patients. Fish bones are the most commonly seen objects leading to bowel perforation. Fish bones are usually invisible on plain films. A computed tomography (CT) scan of the abdomen is helpful to determine the cause of unexplained and persistent abdominal pain. If encapsulated abscess formation cannot be completely resolved by CT-guided drainage, surgical intervention should proceed to prevent profound sepsis. We present the case of a 75-year-old man who had fever and left lower abdominal pain. CT showed a hypodense lesion with a linear foreign body in the abdomen. An intra-abdominal abscess was diagnosed and after surgical intervention, a foreign body, which proved to be a fish bone, was removed. The man could not remember swallowing this bone.

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Introduction

Foreign body ingestion is not an uncommon problem encountered in clinical practice. The accidental ingestion of fish bones may sometimes lead to penetration injuries with complicating abscess formation. Fish bones are the most commonly seen objects leading to bowel perforation, due to their sharp shape. Fish bones are usually invisible on plain

films. A computed tomography (CT) scan of the abdomen is helpful to determine the cause of unexplained and persistent abdominal pain. We present herein the case of a 75-year-old man who had fever and left lower abdominal pain. A fish bone-related intra-abdominal abscess was found by CT study and was successfully treated with surgery.

Case report

A 75-year-old man presented to our emergency room with dull abdominal pain of one-week duration. He had a fever and

* Corresponding author.

E-mail address: yjsu@ms1.mmh.org.tw (Y.-J. Su).



Figure 1 An abscess was seen in the lower peritoneal cavity, and a linear opacity (black arrow) was found within the abscess.

left lower quadrant abdominal pain. Laboratory data showed a white blood cell count of $8.7 \times 10^9/l$ (neutrophils 82%). A CT of the abdomen was performed and revealed an abscess in the lower peritoneal cavity with a linear hyperdense object inside (Figure 1). As a result of the CT findings and at the surgeon's suggestion, the patient decided to undergo an exploratory laparotomy. Surgery revealed a fish bone embedded in the abscess. Culture of the abdominal abscess was positive for *Klebsiella pneumoniae*, *Citrobacter diversus*, and *Escherichia coli*. Initial treatment with flomoxef sodium and metronidazole for 5 days was applied, followed by cefazolin, gentamicin, and metronidazole for 8 days following the results of culture of the abdominal abscess. He recovered and was discharged on day 19 after admission.

Discussion

Foreign body ingestion is not an uncommon presentation in clinical practice, and is seen more commonly in men than women.¹ The majority of ingested foreign bodies pass through the gastrointestinal tract smoothly within one week.² However, gastrointestinal perforation as a result of foreign body ingestion occurs in about 1% of these patients.³ The first case of hepatic abscess as a result of a gastrointestinal perforation caused by a foreign body was published by Lambert in 1898.⁴ Fish bones are the most commonly seen objects leading to bowel perforation.⁵

The most common clinical features of intra-abdominal perforations caused by foreign body ingestion are abdominal pain (95%), fever (81%), and localized peritonitis (39%).¹ The ileum (39%) and jejunum (27%) are the sites most commonly perforated by the ingested foreign bodies,¹ and the most commonly seen complications are liver abscess resulting from perforation of the gastrointestinal tract, esophageal perforation with deep neck infection, thyroid abscess, tongue

abscess, and mediastinal abscess. Most patients have non-specific symptoms. Dysphagia (64%) and odynophagia (45%) are the commonly seen initial symptoms and signs of accidental ingestion of foreign bodies.⁶ If the foreign body passes through and penetrates the GI tract, it may well lead to some abdominal pain with poor appetite, and even fever with chills.

Fish bones are usually invisible on plain film. A CT scan of the abdomen is helpful to determine the cause of unexplained and persistent abdominal pain. In 1990, Ngan et al. prospectively studied 117 patients who had accidentally ingested fish bones. Seventy percent of cases had the fish bones successfully removed by endoscopy. They concluded that because of the serious potential complication from fish bone ingestion, a combination of oral examination followed by flexible endoscopy is indicated in all patients who have swallowed sharp and long foreign bodies.⁷ In our case, the patient could not remember swallowing the fish bone, and panendoscopy is not an efficient tool once an intra-abdominal abscess has been found by CT.

For patients who cannot recall swallowing a foreign body, and who have an abscess formation, surgical intervention for open drainage and removal of the foreign body are mandatory. In our case, no open bowel wound was seen; the only intraoperative finding was the intra-abdominal abscess. We presumed that the initial penetrating hole in the small intestine caused by the fish bone was small and had closed up thereafter.

If an encapsulated abscess formation cannot be completely resolved by CT-guided drainage, surgical intervention should proceed to prevent profound sepsis. For most intra-abdominal abscesses, CT-guided drainage is a useful treatment tool. However, if there is a foreign body embedded in the abscess, an open laparotomy and removal of the foreign body is the treatment of choice.

Conflict of interest: No conflict of interest to declare.

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